

THE IDENTITY OF *ALOE SOMALIENSIS* WATSON  
(SOMALILAND PROTECTORATE), AND OF  
*A. TOMENTOSA* DEFLERS (ARABIA)

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(With Plates XI—XV)

(1) *A. somaliensis* Watson

In 1894–95, Miss Edith Cole (accompanying Mr. and Mrs. E. Lort-Phillips and Mr. F. Gillet Gunnis) undertook a botanical journey from Berbera on the coast of Somaliland Protectorate, southwards to the Golis Range, where they ascended to over 5,000 feet.

Subsequently, in 1899, *Aloe somaliensis* was described by Watson from plants raised at Kew from seeds that had been gathered by Miss Edith Cole on that journey. In the light of present-day knowledge, it seems that the probable locality where Miss Cole collected the seeds was above Sheikh Pass in the neighbourhood of Upper Sheikh.

Apart from a rambling Aloe found in large numbers sprawling over rocks on northern slopes of Sheikh Pass, two other species of Aloe occur near Sheikh Pass and Upper Sheikh.

One of these is a species allied to *A. lateritia* Engler in East Africa, and to *A. macrocarpa* Tod. in Ethiopia and Eritrea, both in the Section *Saponariae*. It has broadly ovate-attenuate “soapy” spotted leaves, and perianths conspicuously inflated at base and much constricted above the ovary.

Because a similar plant had been figured and named *A. somaliensis* in *Missione Biologica nel Paese Dei Borana* 4 : 348, fig. 119 (1938), I had thought that this was the long-sought-for *A. somaliensis*, but it is not. The Borana plant (between Mega and Moyale in Southern Ethiopia) had been wrongly identified.

The second species near Upper Sheikh has rather glossy spotted leaves, and a branched inflorescence with cylindric-trigonus perianths that are not inflated at base, or constricted above the ovary. This is the true *A. somaliensis*, for the following reasons:

In his description of *A. somaliensis*, Watson in *Gard. Chron.* 26 : 430 (1899) refers to the glossiness and conspicuous leaf markings, while Wright in *Kew Bull.* 135 (1901) includes “*folia utrinque vernicosa* . . . Miss Edith Cole 261”.

Material in Kew labelled “Hort. Miss Edith Cole, March 3, 1905”, from a plant that flowered in Kew establishes that the perianths are

cylindric-trigonus—not basally inflated and constricted above the ovary as in the Sect. *Saponariae*. The leaves are glossy and not “soapy”.

Mr. P. R. O. Bally and I have independently found a form of *A. somaliensis* near Upper Sheikh, which has rather large leaves, that with age, become marbled rather than spotted. In floral characters they are indistinguishable.

The first to collect plants and to prepare herbarium specimens of *A. somaliensis* appears to be Mr. J. B. Gillett, who found the species on sandstone rocks north of Hargeisa, at 4,300 ft., on 23 Sept. 1932. His No. 3996 (K) is typical.

In August 1952, Mr. C. F. Hemming found the same species about 50 miles north-east of Hargeisa on the road to Berbera.

Mr. Bally has found *A. somaliensis* at Ged Dehti, 20 miles north of Hargeisa, and on Aderiale Hill 5 miles further on, in October 1957. He has also found it near Borama, on the lower part of Fodjor escarpment west of Sheikh, near Upper Sheikh, and on Wagger mountain east of Sheikh.

During my own recent investigations throughout the Protectorate, I found that the largest numbers of *A. somaliensis* occurred 4 miles south-east and 7 miles north-west of Borama, which is 72 miles and 83 miles respectively, west of Hargeisa, at 5,100 ft. and 4,600 ft., flowering in September 1957.

*A. somaliensis* can now be more fully described, and figured:

***A. somaliensis*** Watson in *Gard. Chron.* 26 : 430 (1899); C. Wright in *Kew Bull.* 135 (1901); Berger in *Monatsschrift f. Kakteenkunde* 14 : 120 (1904) *cum fig.*; in *Pflanzenr. Liliac.-Aloin.* 236 (1908).—Non *Miss. Biolog. Borana* 4 : 348, t. 119 (1939). This is a totally different species in Sect. *Saponariae*.

**DESCRIPTION.** *Plant* succulent, growing singly or forming small groups. *Stem* none or short.

*Leaves* 12—16, densely rosulate, usually narrowly lanceolate, spreading to slightly recurved, averaging 20 cm. long, 7 cm. broad at base, 8—10 mm. thick; *upper surface* flat low down, slightly canaliculate upwards, rather glossy brownish green with numerous pale green lenticular spots throughout; *lower surface* convex, paler brownish green than upper surface, and with more numerous, more crowded, sometimes confluent lenticular spots throughout; *margins* sinuate-dentate, the teeth reddish brown, pungent, deltoid, averaging 4 mm. long, 8—10 mm. apart, the interspaces paler; *sap* dries brown.

*Inflorescence* a branched panicle, 60—80 cm. high, usually produced suberectly to obliquely.



PLATE XI. *Aloe somaliensis* Watson  
*Upper:* Plant 4 miles south-east of Borama, Somaliland Protectorate. Height 70 cm.  
*Lower:* Flowers 1/1 from bud to early fruit stage.



PLATE XII. *Aloe somaliensis* Watson

*Upper:* Plant collected near Upper Sheikh, flowering in Johannesburg. Height 50 cm.

*Lower:* Flowers 1/1 from bud to post-pollination stage.

*Peduncle* plano-convex and 10—12 mm. broad at base, terete upwards, averaging 5—8-branched from below the middle, the lowest branches sometimes with 1—2 branchlets.

*Racemes* cylindric, subclaxly flowered, 15—20 cm. long, 5—6 cm. diameter, when erect the flowers evenly distributed around the axis, with youngest buds suberect, older buds horizontally disposed, open flowers nutant; in oblique racemes the flowers usually subsecund.

*Bracts* ovate-attenuate, about 8 mm. long, 4 mm. broad, thin, scarious, white, many-nerved.

*Pedicels* the lowest averaging 8 mm. long.

*Perianth* pinkish scarlet, turning paler after pollination, cylindric-trigonus, 28—30 mm. long, basally flat to obtuse, 9 mm. diameter across the ovary, thence very slightly narrowed on the underside only, slightly narrowed to the mouth, the whole perianth minutely speckled; *outer segments* free for 10 mm., obscurely 3-nerved to base, the apices subacute and slightly spreading; *inner segments* broader than the outer, with a broad pale border and keeled in upper third, the keel the colour of the perianth, the apices more obtuse and more spreading than the outer.

*Filaments* lemon, the 3 inner narrower and lengthening before the 3 outer with their *anthers* in turn exerted 1—2 mm.

*Stigma* at length exerted 3 mm. *Ovary* olive-green, 6 mm. long, 3 mm. diameter. (Plates XI and XII.)

SOMALILAND PROTECTORATE: Cult. Kew from seeds gathered by Miss Edith Cole n.261/1895, type (K); Hort. Miss Edith Cole, March 3, 1905, cult. Kew (K); Sheikh, 21 Feb. 1929, E. Burne n.4 (K) probably belongs here. Sandstone rocks north of Hargeisa, 9° 34' N., 44° E., alt. 4,300 ft., fl. 23 Sept. 1932, J. B. Gillett 3996 (K); Sheikh Pass, 4,000 ft., 1 June 1949. Bally 7146 (Cor. Mus. n.21896); Loli Mudeda, 8 miles N.W. of Borama, 4 Oct. 1954, Bally 9669 (Cor. Mus. n.21898); Ged Dehti, 20 miles N. of Hargeisa, 2 Oct. 1957, Bally 11770 (Cor. Mus. n.21901); Aderiale Hill, 25 miles N. of Hargeisa, 2 Oct. 1957, Bally 11784 (Cor. Mus. n.21902); 4 miles S.E. of Borama, 24 Oct. 1957 (Cor. Mus. n.11922); 4 miles S.E. of Borama, 72 miles from Hargeisa, c. 9° 55' N., 43° 12' E., alt. 5,100 ft., 30 Aug. 1957, Reynolds 8363 (K, EA, PRE); 7 miles N.W. of Borama, 4,600 ft., 1 Sept. 1957, Reynolds 8381 (K, EA, PRE).

NATIVE NAME: Mr. J. B. Gillett records that the Somali name is *Daar biyu*, biyu meaning water.

*Affinities*: The nearest ally to *A. somaliensis* in Somaliland Protectorate is the very small species *A. jucunda* Reynolds, on Gaan Libah.



Very young plants of *A. somaliensis* have small rosettes of leaves resembling those of *A. jucunda* but are larger and have a simple, taller inflorescence. Adult plants with their much larger leaves and much-branched inflorescence could never be confused.

*A. mc-loughlinii* Christian near Dire Dawa, in Harar Province, Eastern Ethiopia, is another close ally, but differs in having longer, narrower more glossy leaves, a taller more compact inflorescence, and shorter more squat flowers.

(2) *A. tomentosa* Deflers

Mr. Gillett and others have stressed the marked affinity of the flora of Somaliland Protectorate with that of Southern Arabia. One species of Aloe from Arabia, *A. inermis* Forsk, has been found in considerable numbers in the far eastern parts of the Protectorate near Las Anod, and beyond the Great Nogal Valley near Halin, and further north-eastwards near the Somalia border.

Another species—with very shaggy perianths—grows in considerable numbers near Moledera, which is about 40 miles southwards from Erigavo, and this species, it seems, belongs to *A. tomentosa* Deflers.

Thanks to Mr. J. Leandri, I have been able to study and photograph the type material of *A. tomentosa* which he sent out to me from the Herbarium of the Natural History Museum in Paris. A label on the sheet reads, "A. Deflers—Voyage dans l'Yemen 1887. No. 616. Bauân. Alt. 2700 m, 30 Juin 1887". The description was published in Deflers' "Voyage au Yemen", p. 211 (1887), the type locality being: Ad fauces montis Hadhur, prope Bauân. There are no figures.

The type material consists of the terminal 40 cm. of an inflorescence and includes the terminal raceme and a shorter branch-raceme. The terminal raceme is densely flowered, conical, 11 cm. long, 5.5 cm. diam., with the apical buds crowded and hidden by imbricate bracts. Perianths are remarkably tomentose, while the axis below the raceme is also tomentose.

Allowing for geographical variations, and for racemes varying from shorter and denser to longer and laxer, I now regard the Moledera plants as belonging to *A. tomentosa*.

Compared with the type, the Moledera form differs in having slightly longer less dense racemes, with the apical buds less crowded and less hidden by their bracts.

The leaves, however, pose a problem. There is no leaf or portion of a leaf included with the type of *A. tomentosa*. In his description, Deflers (*l.c.*) merely states "*foliis radicalibus, ensiformibus, carnosius, crassis, scapo brevioribus*"; he gives no measurements, and makes no mention of the leaf margins. Whether they are entire or dentate is not known.



PLATE XIII. *Aloe tomentosa* Deflers  
 Photograph of the type, in Paris—Deflers 616, Bauân, Yemen, alt. 2,700 m.,  
 30 June 1887.



PLATE XIV. *Aloe tomentosa* Deflers

*Upper:* Somaliland Protectorate, near Moledera, 40 miles south of Erigavo, alt. 4,800 ft. Height 60 cm. *Lower:* Flowers 1/1 from bud to post-pollination stage.





PLATE XV. *Aloe tomentosa* Deflers

*Upper:* A robust form near Moledera, 40 miles south of Erigavo. Height 75 cm.

*Lower:* Flowers 1/1 from bud to post-pollination stage.

Mr. Leandri states that there are no manuscripts or notebooks of Deflers in the Library of the Museum, hence, the leaves will remain unknown until the type locality in the Yemen can be re-visited. I had hoped to visit the Yemen from Aden, but hostilities along the border made this impossible.

Since the height and branching of the inflorescence of the Moledera plants, also the pedicels, bracts and very tomentose perianths agree with *A. tomentosa*, I conclude that the Moledera plants are conspecific with *A. tomentosa*.

*A. tomentosa* is nearest allied to *A. trichosantha* Berger (which I have seen in considerable numbers at the type locality, Ghinda, between Asmara and Massawa in Eritrea), but in the latter the leaf margins are markedly dentate, the racemes are much longer and laxer, and the perianths are less tomentose.

*A. tomentosa* usually has little or no stem, and sometimes forms large dense groups. The leaves average 9 cm. broad and 35 cm. long, while margins vary from entire to minutely dentate with teeth only .5—1 mm. long and 20—40 mm. apart.

The subjoined description is based on plants in considerable numbers at Moledera:

**A. tomentosa** Deflers in *Voyage au Yemen*, 211 (1899); Berger in *Pflanzenr. Liliac.-Alcin.* 232 (1908).

*Plant* succulent, with short decumbent stems and upturned rosettes, forming small to large dense groups.

*Leaves* 16—20, densely rosulate, lanceolate-deltoid, averaging 35 cm. long, 9 cm. broad at base, narrowing to an acute dentate apex, spreading, the lowest usually falcately up-curved; *upper surface* grey-green with reddish tinge, flat low down, slightly channelled upwards, unicoloured, not spotted; *lower surface* convex, greener than upper surface; *margins* with narrow pinkish brown cartilaginous border armed with blunt teeth .5—1 mm. long, 20—40 mm. apart, the teeth sometimes obsolete and margins entire; *sap* dries pale yellow.

*Inflorescence* branched, averaging 60—70 cm. tall.

*Peduncle* basally plano-convex and 14 mm. broad, terete upwards, averaging 3—4-branched from about the middle, the lowest branch subtended at base by an ovate-acute, thin scarious 5—7-nerved bract 10 mm. long, 8 mm. broad.

*Racemes* cylindric-conical, the terminal averaging 15 cm. long, 5—6 cm. diam., the lateral shorter, subdensely flowered, the apical buds erect,

adpressed to the axis, and sometimes hidden by densely imbricate bracts, open flowers nutant.

*Bracts* ovate-deltoid, 7 mm. long, 4 mm. broad, thin, scarious, dirty white, 5-nerved.

*Pedicels* averaging 6 mm. long, sometimes up to 9 mm. long.

*Perianth* cylindric-trigonus, rose-pink, conspicuously tomentose-shaggy; 24—28 mm. long, slightly rounded at base, 7—8 mm. diam. across the ovary, thence slightly narrowed on underside only, and trigonous to a wide open mouth; *outer segments* free for 9 mm. (tube 17 mm.), paler at margins, obscurely 3-nerved, the apices subacute, spreading; *inner segments* free but dorsally adnate to the outer for 16 mm., broader than the outer and with more obtuse more spreading apices.

*Filaments* lemon, the 3 inner narrower and lengthening before the 3 outer with their *anthers* in turn exerted 3—4 mm.

*Stigma* at length exerted 4—5 mm.

*Ovary* pale olive, 6 mm. long, 3 mm. diam.

*Capsule* 18 mm. long, 9—10 mm. diam. at the middle.

*Habitat* Yemen: Ad fauces montis Hadhur, prope Bauân, 2,700 m., 30 Juin 1887, Deflers 616! type (P).

SOMALILAND PROTECTORATE: Moledera, 40 miles south of Erigavo, c. 10° 09' N., 47° 13' E., alt. 4,700—4,900 ft., fl. 12 Sept. 1957, Reynolds 8445 (PRE, K, EA); Moledera, 7 Nov. 1954, Bally 10358 (EA).

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